REMARKS

The present invention is a system for multicasting messages to a plurality of receiving network processors in a network, a computer program executable by a computer embodied on a computer readable medium for multicasting messages to a plurality of receiving network processors in a network and a method which transmits multicast messages from at least one transmitting network processor to a plurality of receiving network processors in a network. A system for multicasting messages to a plurality of receiving network processors in a network in accordance with an embodiment of the invention includes a MPD database table 140 comprising a plurality of parameters used to manage transmission by at least one transmitting network processor 60 or 70 in a network 10 and reception of multicast messages in the network by a plurality of the receiving network processors 30 or 40; a MDP initialization module 100 associated with the at least one transmitting network processor which reads a plurality of parameters from the MDP database table 140 to initialize a MDP transmission session by the at least one transmitting network processor utilizing the plurality of parameters; a MDP initialization module 120 associated with each of a plurality of receiving network processor which reads a plurality of parameters from the MDP database table 140 to initialize a MDP receiving session by the plurality of receiving network processors 30 and 40 utilizing the parameters; a MDP operations module 110 associated with the at least one transmitting network processor which receives requests to transmit messages, creates a MDP information packet for each message, and transmits each message to each of the plurality of receiving network processors 30 or 40 designated in the

MDP information packet; and a MDP operations module 130 associated with each of the plurality of receiving network processors which receives messages transmitted by the MDP operations module associated with the at least one transmitting network processor and transmits the messages which are received to a higher level software application. This subject matter provides an improvement over the multicast dissemination protocol MDP as described beginning on page 4, lines 6, of the specification through lines 1-2 of page 6. As is described therein, the MDP protocol as currently implemented in networks is not fine tunable which impacts performance in the network.

With the present invention, the MDP database 140 provides storage of a plurality of parameters which are read and provided to the MDP initialization module in the transmitting and receiving processors. The stored parameters permit a systems administrator to control the sending and receiving of messages so that the network operates at maximum efficiency.

Claims 1-36 stand rejected under 35 U.S.C. §102(b) as being anticipated by Macker et al which is the IEEE publication 7803-5538. This ground of rejection is traversed with respect to newly submitted claims 38-74 for the following reasons.

Independent claim 38 recites:

> A system for multicasting messages to a plurality of receiving network processors in a network, comprising:
> a MDP database table comprising a plurality of parameters used to manage transmission by at least one transmitting network processor in the network and reception of multicast messages in the network by a plurality of the receiving network processors;
> a MDP initialization module associated with the at least one transmitting network processor which reads a plurality of parameters from the MDP transmission database table to initialize a MDP transmission session by the at least one transmitting network processor utilizing the plurality of parameters;

a MDP initialization module associated with each of a plurality of receiving network processors which reads a plurality of parameters from the MDP database table to initialize a MDP receiving session by the plurality of receiving network processors utilizing the parameters;

a MDP operations module associated with the at least one transmitting network processor which receives requests to transmit messages, creates a MDP information packet for each message, and transmits each message to each of the plurality of receiving network processors designated in the MDP information packet; and

a MDP operations module associated with each of the plurality of receiving network processors which receives messages transmitted by the MDP operations module associated with the at least one transmitting network processor, and transmits the messages which are received to a higher level software application.

Independent claim 52 recites:

A computer program, executable by a computer, embodied on a computer readable medium for multicasting messages to a plurality of receiving network processors in a network, comprising:

a MDP database table comprising a plurality of parameters used to manage transmission by at least one transmitting network processor in the network and reception of multicast messages in the network by a plurality of the receiving network processors;

a MDP initialization module associated with the at least one transmitting network processor which reads a plurality of parameters from the MDP transmission database table to initialize a MDP transmission session by the at least one transmitting network processor utilizing the plurality of parameters;

a MDP initialization module associated with each of a plurality of receiving network processors which reads a plurality of parameters from the MDP database table to initialize a MDP receiving session by the plurality of receiving network processors utilizing the parameters;

a MDP operations module associated with the at least one transmitting network processor which receives requests to transmit messages, creates a MDP information packet for each message, and transmits each message to each of the plurality of receiving network processors designated in the MDP information packet; and

a MDP operations module associated with each of the plurality of receiving network processors which receives messages transmitted by the MDP operations module associated with the at least one transmitting network processor, and transmits the messages which are received to a higher level software application.

and Independent claim 66 recites:

> A method which transmits multicast messages from at least one transmitting network processor to a plurality of receiving network processors in a network, comprising:
>
> the at least one transmitting network processor reading a plurality of parameters from a MDP database which initializes and controls the transmission of a multicast message by the at least one transmitting network processor;
>
> a plurality of the plurality of the receiving network processors reading a plurality of parameters from a MDP database which initializes and controls reception of the multicast message by the plurality of the receiving network processors which read the plurality of parameters;
>
> transmitting the multicast message from the at least one network transmitting processor to the plurality of receiving network processors which read the plurality of parameters when a message delay time does not exceed a time computed to transmit the multicast message or the message delay time does not exceed a perishability time contained within the multicast message; and
>
> transmitting a negative acknowledgment to the at least one of the transmitting network processor when at least one receiving network processor determines that data in the multicast message is missing and when the at least one of the receiving network processor which read the parameters was designated as an action entity within a field contained within the MDP information packet.

Each of the independent claims recite in substance a MDP database comprising a plurality of parameters used to manage transmission by at least one transmitting processor in the network and reception of multicast messages in the network by receiving network processors, a MDP initialization module which reads the plurality of parameters from the MDP database table to initialize a MDP transmission session associated with the at least one transmitting network processor utilizing a plurality of parameters and a MDP initialization module associated with a plurality of receiving network processors which reads a plurality of parameters from the MDP database table to initialize a MDP receiving session by receiving network

processors utilizing the read plurality of parameters. There is no counterpart of this subject matter in the Macker et al publication.

The Examiner cites the server transmission on page 627, and the client reception and synchronization on page 628 as the MDP database, MDP initialization modules. However, there is no counterpart of this subject matter in Macker et al. While it is true that the server transmission is described as having the content of MDP object determined by several source based protocol parameters, this reference is to storage of the sender or server as illustrated in Fig. 2. There is nothing which corresponds to the MDP database which is read by the at least one transmitting network processor and the plurality of receiving network processors to provide parameters for controlling transmission and reception by the claimed transmitting and receiving network processors. The description of the client reception and synchronization merely states that "[u]pon reception of ... messages from a new session source [the transmitting server], and MDP client will 'synchronize' with the source by beginning to maintain state on the source by using the object segmentation and encoding parameters". It is therefore seen that there is no reading from a database since what is involved is merely decoding of the received information. Moreover, the Macker et al disclosure does not even recognize the need for optimization by fine tuning based upon controlling parameters read from a database which are used by the transmitting and receiving network processors to control transmission of multicast transmissions, which is the benefit provided by the claimed MDP database table and associated MDP initialization modules, which read parameters for controlling the transmitting and receiving of MDP sessions by at least one transmitting network processor and receiving network processors.

Moreover, claim 66 further recites "when the at least one of the receiving processor which read the parameter was designated as an action entity within a field contained within the MDP information packet". While page 628, column 2, does discuss acknowledgements, it is submitted that the aforementioned limitation is not taught.

Moreover, the dependent claims 39-51, 53-65 and 67-74 define more specific aspects of the present invention which are neither anticipated nor rendered obvious by Macker et al.

In view of the foregoing amendments and remarks, it is submitted that each of the claims in the application is in condition for allowance. Accordingly, early allowance thereof is respectfully requested.

To the extent necessary, Applicants petition for an extension of time under 37 C.F.R. §1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 01-2135 (199.38514X00) and please credit any excess fees to such Deposit Account.

Respectfully submitted,

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Attachments

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